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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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ECM #72212				
PO Box 4668				
New York, NY 10163-4668				
			EXAMINER	
			CLOUD, JOIYA M	
		ART UNIT	PAPER NUMBER	
		2444		
		NOTIFICATION DATE	DELIVERY MODE	
		11/19/2008	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/801,896

Applicant(s)

BALAN ET AL

Examiner

Joiya M. Cloud

Art Unit

2444

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

This action is responsive to the communication filed 08/18/2008. Claims 1-12 are PENDING.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/18/2008 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant's claim is drawn

towards “application container sharing state information about its application instance with other application containers” and “calculating quality of service metrics for each application instance using a decentralized workload management layer based on the quality of service metrics,” however no mention of the above recited limitations are disclosed in the specification. Furthermore, Applicant stated in the Remarks filed 08/18/2008 that support for the above cited amendments can be found at least at page 9, lines 14-17, page 15, lines 23-25 and page 9, lines 5-6, however none of the cites page and line numbers of the specification disclose support for the amendments to the claims. Nowhere does the specification indicate each application container sharing state information about its application instance with other application containers and how quality of service metrics are calculated for each application instance by the application containers.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dritschler et al. (U.S. Publication No. 2003/0005028 A1, hereinafter Davis) in view of Davis (US Patent No. 7, 254,634).

As per claim 1, Dritschler teaches method for executing a network-based distributed application, the method comprising: executing application instances of the distributed application by application containers (paragraph [0029], lines 7-12, where application containers (address spaces) execute the one or more server instances); calculating quality of service metrics for each application instance by the application containers (paragraph [0018], lines 9-15, paragraphs [0028], lines 11-15, [0030], [0034], and [0038], where quality of service metrics are the performance criteria and goals); and distributing application workload among the application instances using a decentralized workload management layer based on the quality of service metrics (Abstract, paragraph [0028] and [0029]).

However, Dritschler does not explicitly teach each application container sharing state information about its application instance with other application containers.

Davis teaches each application container sharing state information about its application instance with other application containers (col. 2, lines 42-46, col. 8, lines 42-49, where runtime containers within a content directory delivery network share session state information with each other).

As per claim 2, Dritschler-Davis teaches the method further comprising associating application containers with autonomous workload management elements, the workload

management elements forming the workload management layer (**Dritschler: paragraph [0028]**).

As per claim 3, Dritschler-Davis teaches the method further comprising coordinating the application instances through a coordination mechanism coupled to the workload management layer (**Dritschler: paragraph [0029]**).

As per claim 4, Dritschler-Davis teaches the method wherein distributing application workload among the application instances further comprises reducing workload assigned to an application container when the quality of service metrics reach an overload threshold value (**Dritschler: paragraphs [0037]-[0038]**).

As per claim 5, Dritschler-Davis teaches the method wherein reducing workload assigned to the application container further comprises: examining an encoding of work unit groups provided by each application instance (**Dritschler: paragraph [0032]**); splitting a currently assigned work unit group into smaller work unit groups (**Dritschler: paragraph [0037]-[0038] and [0043]**); assigning at least one of the smaller work unit groups to other application containers (**Dritschler: paragraph [0037]-[0038]**); and utilizing a coordination mechanism to update changes in workload assignments to the other application containers

As per claim 6, Dritschler-Davis teaches the method wherein distributing application workload among the application instances further comprises increasing workload assigned to the application container when the quality of service metrics reach an under-load threshold value (**Dritschler: paragraph [0040]-[0042], and [0044]**).

As per claim 7, Drtischler-Davis teaches the method wherein increasing workload assigned to the application container further comprises: examining an encoding of work unit groups provided by each application instance (**Drtischler: paragraph [0038]**); combining at least two currently assigned work unit groups into a smaller work unit group (**Drtischler: paragraph [0038]**); assigning the smaller work unit group to the application container (**Drtischler: paragraph [0038]**); and utilizing a coordination mechanism to update changes in workload assignments to the other application containers (**Drtischler: paragraph [0038]**).

As per claim 8, Drtischler-Davis teaches the method further comprising dividing workload assigned to a single application instance to at least two application instances if a quality of service metric reaches an overload threshold (**Drtischler: paragraph [0044]**).

As per claim 9, Drtischler-Davis teaches the method further comprising: dividing a total workload performed by the distributed application among the application instances (**Drtischler: paragraph [0043]-[0045]**); assigning each of the application instances a fractional workload (**Drtischler: paragraph [0043]-[0045]**); and filtering client requests at the application containers based on the fractional workload assigned to the application instances (**Drtischler: paragraph [0043]-[0045]**).

As per claim 10, Drtischler-Davis teaches the method further comprising migrating a client from a first application container to a second application container if workload from the client is not assigned to the application instance executing at the first application container (**Drtischler: paragraph [0028]**).

As per claim 11, Drtischler-Davis teaches the method further comprising labeling client requests such that application containers can determine if the requests belong to the fractional workload assigned to the application instances (**Drtischler: paragraphs [0028] and [0032]**).

As per claim 12, Drtischler-Davis teaches the method further comprising receiving the application instances from application loaders (**Drtischler: paragraphs [0028] and [0032]**).

Response to Arguments

A) The application container recited in claim 1 are clearly distinguished from server address spaces.... application containers recited in claim 1 are not disclosed in Dritschler.

As to the above argument A), Examiner respectfully disagrees. Examiner submits that the detailed explanation of the FOA addressed by Applicant (i.e "where the containers are the sever address spaces") was merely clarification of the reference's representation of the server containers. Dritschler instant specification notes that a server address space is "also called a sever container." (paragraph [0017], lines 4-7). Therefore, Dritschler teaches the application containers of claim 1 where application containers (address spaces) execute the one or more server instances, paragraph [0029], lines 7-12. As per Applicant's exemplification of application container distinction (i.e. amendments where the recited application containers share state information about its application instance with other application containers), see above new grounds of rejection addressing Applicant's amendments.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joiya Cloud whose telephone number is 571-270-1146. The examiner can normally be reached Monday to Friday from on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on 571-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3922.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMC

/William C. Vaughn, Jr./

Supervisory Patent Examiner, Art Unit 2444